

CATALOGUE

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IMS2 SERIES SOFT STARTERS



AuCom

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IMS2 Series Soft Starters are a **total motor starting solution**. They include all the functionality expected from an advanced and technically superior soft starter. IMS2 Series Soft Starters also provide some elementary features that make installation and use simple and straight forward.

Most significant among these elementary features is the enclosure style of IMS2 models up to 253 Amps. Unlike most other soft starters, the IMS2 is a **fully enclosed unit suitable for immediate installation**. No additional enclosures are required for these models. Both IP42 and IP54 versions are available and ensure a quick installation that saves the costs normally associated with enclosing and ventilating the starter.

A **user friendly control panel simplifies installation and use**. Local start, stop and reset push buttons are provided along with a local/remote push button for switching control between the local panel and remote control circuits. The parameter display provides feedback on motor current and temperature as well as displaying



diagnostic information in the event of a trip condition. These features save time and costs because the addition of discrete components to perform these functions is unnecessary.

IMS2 starters are **suitable for use in a broad range of applications**. The standard range can operate on supplies up to 525 VAC 50/60 Hz, with a second range available for supplies up to 690 VAC 50/60Hz. Each range includes models suitable for controlling motors from 4kW through to in excess of 1000kW. IMS2 starters can also be connected to the motor in 6 Wire or inside delta configuration. This enables the starter to control

motors 50% larger than possible with standard 3 Wire connection. This is possible because the soft starter controls only phase current rather than line current when connected in 6 Wire configuration. 6 Wire connection makes replacing star/delta starters easy because existing motor wiring need not be changed.

Optimum control of motor starting and stopping for all load types is ensured by the broad range of start and stop profiles provided by the IMS2. Four starting options are provided including a new *torque control* feature. Torque control can be used to create a more linear acceleration than possible with standard constant current control. Three stopping options are also provided. Traditional soft stop technology for extending motor deceleration is



complemented by a new and *advanced pump control* feature. These technologies combine to make water hammer a thing of the past. For inertial loads the IMS2 can also provide a braking function for rapid stopping.

Starting and stopping motors is however only part of the IMS2's capabilities. **A wide range of advanced motor protection features**, including a motor thermal model, ensure that motors can be operated with confidence. In the area of motor protection the IMS2 again provides cost savings because additional motor protection devices are not required. The IMS2 protection systems continue to function even when the starter is bypassed.

Protection for the load is also provided by the IMS2. Features such as undercurrent protection, shearpin protection and excess start time protection can all be used to detect and protect against

abnormal operating conditions.

The IMS2 records all trip events in a trip log that stores the last eight trip events. This ensures rapid identification and remedy of conditions causing trip states. Further, **a fully programmable Auto-reset function can be used to restart motors** after

user selected trip conditions. This is particularly useful for remote installations because it prevents unnecessary site visits to reset trip states caused by temporary faults.

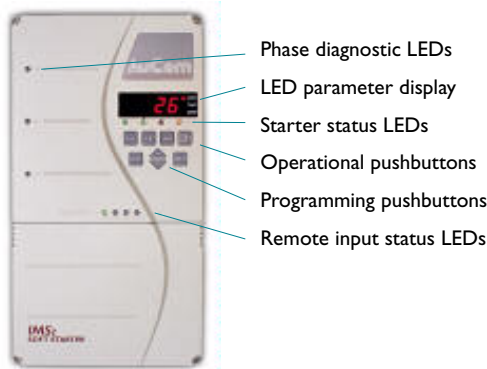
Interfacing with external control circuitry is easy with the IMS2. As standard, the starters include four remote control inputs, one fixed and three programmable relay outputs, one programmable analogue output as well as a RS485 serial communications link. This hardware allows the IMS2 to provide external control systems with a wide range of information on motor and system performance without the need for additional monitoring equipment.

IMS2 soft starters are designed to provide superior performance and maximum user safety. The products are **independently tested to all relevant international standards** including IEC60947-4-2, UL508, CSA 22.2 No. 14, AS/NZS 3927-4-2, CISPR-11. This proven performance means you can be confident when selecting IMS2 soft starter for your motor control applications.

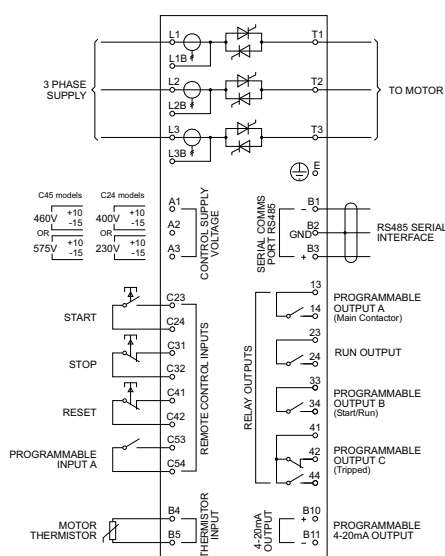


FEATURES & SPECIFICATIONS

IMS2 starters are user friendly. Simple applications can be commissioned with only one programming adjustment. The required adjustment sets the motor's Full Load Current rating. For advanced applications, the IMS2 provides an extensive range of functions that cover the majority of motor starting and control requirements.



ELECTRICAL SCHEMATIC



STARTING FUNCTIONS

- Constant current start mode
- Current Ramp start mode
- Torque control
- Kickstart

STOPPING FUNCTIONS

- Soft Stop
- Pump Stop
- Soft Braking
- D.C.Braking (option)

PROTECTION FUNCTIONS

- Motor thermal model
- Motor thermistor input
- Phase imbalance
- Phase sequence
- Electronic shearpin
- Undercurrent
- Auxiliary trip input
- Starter heatsink overtemperature
- Excess start time
- Supply frequency
- Shorted SCR
- Power circuit
- Motor connection
- RS485 failure

INTERFACE FORMATS

- Remote control inputs (3 x fixed, 1 x programmable)
- Relay outputs (1 x fixed, 3 x programmable)
- 4 - 20mA output (1 x programmable)
- RS485 link

HUMAN INTERFACE

- Local push buttons (Start, Stop, Reset, Local/Remote)
- Local programming buttons
- LED parameter display
- Remote input status and Phase indicator LEDs

POWER CONNECTION

- 3 Wire connection
- 6 Wire connection (option)
- Bypass terminals (enables protection functions when bypassed)
- 200 ~ 525 VAC or 200 ~ 690 VAC models

SUNDRY FEATURES

- Current readout
- Motor temperature readout
- Trip log (last eight trips)
- Multiple function sets
- Restart delay
- Low current flag
- High current flag
- Overload flag
- Auto-reset
- Auto-stop
- Start counter
- Function lock, password protection
- Store/Restore function settings
- Emergency mode operation
- Thermal model override

ENCLOSURE DETAIL

WALL MOUNT CAPABILITY

IMS2 models up to IMS20253 can be mounted directly onto a wall thereby eliminating enclosure costs. These models are available with either an IP42 rating for clean environments or IP54 for harsh environments. IMS2 models IMS20302 and above are designed for installation into switchboards or dedicated enclosures.

COMPACT DESIGN

IMS2 starters are extremely compact. For switchboard installations the IMS2 saves on both footprint area and overall volume as compared to comparable soft start products.

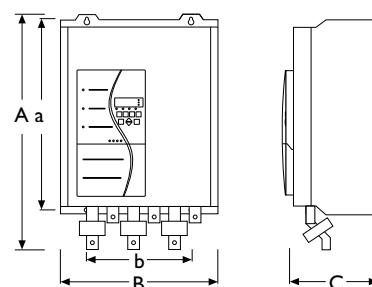
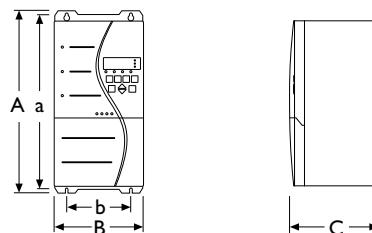


ADJUSTABLE BUS BAR

CONFIGURATION

Models IMS20302 and above allow the installer to select their own desired configuration for power input and output connections. The IMS2 input (L1,L2,L3) and output (T1,T2,T3) bus bars can be configured for either top or bottom entry, or a combination of both. This flexibility allows optimisation of switchboard layout and complements the already compact design.

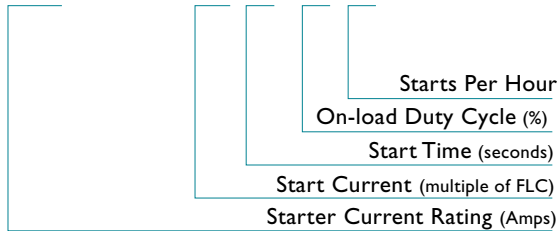
| Dimensions | A (mm) | B (mm) | C (mm) | a (mm) | b (mm) | Weight (kg) | IP Rating |
|------------|-----------|-----------|-----------|-----------|-----------|----------------|--------------|
| IMS20018 | | | | | | | |
| IMS20034 | 380 | 185 | 180 | 365 | 130 | 6 | IP42 or 54 |
| IMS20041 | | | | | | | |
| IMS20047 | | | | | | | |
| IMS20067 | | | | | | | |
| IMS20088 | 380 | 185 | 250 | 365 | 130 | 7 | IP42 or 54 |
| IMS20096 | | | | | | | |
| IMS20125 | | | | | | | |
| IMS20141 | | | | | | | |
| IMS20202 | 425 | 270 | 275 | 410 | 200 | 17.5 | IP42 or 54 |
| IMS20238 | | | | | | | |
| IMS20253 | 425 | 390 | 275 | 410 | 300 | 23 | IP42 or 54 |
| IMS20302 | | | | | | | |
| IMS20405 | | | | | | | |
| IMS20513 | 545 | 430 | 294 | 522 | 320 | 42 | IP00 |
| IMS20585 | | | | | | | |
| IMS20628 | | | | | | | |
| IMS20775 | | | | | | | |
| IMS20897 | | | | | | | |
| IMS21153 | | | | | | | |
| IMS21403 | 845 | 574 | 353 | 707 | 500 | 110 | IP00 |
| IMS21574 | | | | | | | |



SOFT STARTER RATINGS

IMS2 ratings are detailed using the AC53 utilisation code specified by IEC60947-4-2.

78 A: AC-53a 3.5-15 : 50-10



Starter Current Rating: The Full Load Current rating of soft starter given the parameters detailed in the rest of the utilisation code.

Start Current: The maximum available start current given the parameters detailed in the rest of the utilisation code.

Start Time: The maximum available start time given the parameters detailed in the rest of the utilisation code.

On-load Duty Cycle: The maximum permissible percentage of each operating cycle that the soft starter can operate given the parameters detailed in the rest of the utilisation code.

Starts Per Hour: The maximum available number of starts per hour given the parameters detailed in the rest of the utilisation code.

For application requirements not covered by the table below specialised application software is available to ensure accurate and economic model selection.

| | 3.0 x FLC | | 3.5 x FLC | | 4.0 x FLC | | 4.5 x FLC | |
|----------|---------------------------------------|--------|---|--------|---------------------------------------|--------|---|--------|
| | AC53a 3-10:50-10 45°C <1000 metres | | AC53a 3.5-15:50-10 45°C <1000 metres | | AC53a 4-20:50-10 45°C <1000 metres | | AC53a 4.5-30:50-10 45°C <1000 metres | |
| | 3 Wire | 6 Wire | 3 Wire | 6 Wire | 3 Wire | 6 Wire | 3 Wire | 6 Wire |
| IMS20018 | 18 | 27 | 16 | 25 | 14 | 22 | 12 | 19 |
| IMS20034 | 34 | 51 | 32 | 48 | 28 | 42 | 24 | 36 |
| IMS20041 | 41 | 62 | 39 | 58 | 34 | 51 | 28 | 42 |
| IMS20047 | 47 | 71 | 44 | 66 | 39 | 58 | 33 | 50 |
| IMS20067 | 67 | 101 | 60 | 90 | 52 | 79 | 46 | 69 |
| IMS20088 | 88 | 132 | 78 | 116 | 68 | 102 | 59 | 88 |
| IMS20096 | 96 | 144 | 85 | 127 | 74 | 111 | 64 | 96 |
| IMS20125 | 125 | 188 | 112 | 168 | 97 | 146 | 84 | 125 |
| IMS20141 | 141 | 212 | 122 | 183 | 107 | 161 | 94 | 141 |
| IMS20202 | 202 | 303 | 177 | 266 | 155 | 233 | 135 | 202 |
| IMS20238 | 238 | 357 | 211 | 317 | 185 | 277 | 160 | 241 |
| IMS20253 | 253 | 379 | 218 | 327 | 191 | 286 | 167 | 251 |
| IMS20302 | 302 | 453 | 275 | 413 | 239 | 358 | 205 | 308 |
| IMS20405 | 405 | 608 | 376 | 564 | 324 | 486 | 274 | 412 |
| IMS20513 | 513 | 769 | 481 | 722 | 411 | 616 | 342 | 513 |
| IMS20585 | 585 | 878 | 558 | 837 | 474 | 711 | 392 | 587 |
| IMS20628 | 628 | 942 | 595 | 893 | 508 | 762 | 424 | 636 |
| IMS20775 | 775 | 1163 | 756 | 1134 | 637 | 956 | 521 | 782 |
| IMS20897 | 897 | 1346 | 895 | 1342 | 749 | 1123 | 604 | 906 |
| IMS21153 | 1153 | 1730 | 1049 | 1574 | 917 | 1376 | 791 | 1187 |
| IMS21403 | 1403 | 2105 | 1302 | 1953 | 1135 | 1703 | 970 | 1454 |
| IMS21574 | 1574 | 2361 | 1486 | 2229 | 1290 | 1936 | 1091 | 1637 |

AUCOM - SOFT START SPECIALISTS

AuCom Electronics Limited specialises in the design and manufacture of electronic soft starters. As an expert in this field we provide automation companies around the world with access to a range of superior soft start products. Our dedication and commitment to this single technology ensures responsiveness to changing market requirements while centralised design and manufacturing provides our distribution partners the economies of mass manufacture.



Focusing company activities solely on excellence in the field of soft start makes AuCom a powerful partner for distributors and integrators of automation products. AuCom's independently certified ISO9001 : 2000 Quality System ensures an environment of continuous improvement and product approval to IEC, UL and CSA standards verifies product integrity. We have the technology, design and production capabilities to put your company ahead in the field of reduced voltage motor starting.

AuCom entered the motor control field in 1978 by gaining manufacturing rights for an electronic motor energy saving device developed by the American National Aeronautics and Space Administration (NASA). AuCom engineers enhanced this technology for use with three phase induction motors and gained worldwide patents for the work. The next step for AuCom was the addition of a dedicated soft start range. This product was the world's first commercial production of a complete and economic soft starter range.

Since this time AuCom has focused on being a leader in the field of soft starting, working around the world to expand the soft start market and advance the technology and products available.



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